



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10  
1200 Sixth Avenue  
Seattle, Washington 98101

February 9, 1999

Mr. Kevin O'Neill  
U.S. Department of Energy  
Idaho Operations Office  
850 Energy Drive  
Idaho Falls, Idaho 83401

RE: Comments on the Draft Final Remedial Investigation/Feasibility Study for Waste Area Group 5, Operable Unit 5-12, at INEEL

Dear Kevin:

Enclosed are our comments on the draft final Remedial Investigation/Feasibility Study for WAG 5, Operable Unit 5-12. My primary concern is the potential underestimation of contaminant source terms and the potential inadequacy of the existing groundwater monitoring network to detect contaminants from these sources. Let's set up a conference call to discuss and resolve these issues at your earliest convenience.

Sincerely,

A handwritten signature in black ink, which appears to read "Keith A. Rose", is positioned above the typed name.

Keith A. Rose  
INEEL WAG Manager

Enclosure  
cc: Scott Reno, IDEQ

RESPONSE TO RESOLUTION OF COMMENTS  
ON THE DRAFT FINAL WAG 5 RI/FS

**Item 7.** The text states that a treatability variance would be required if PCB concentrations exceed 50 ppm. The resolutions states that the PCB concentration is below 100 ppm. Does this mean that a treatability variance will not be required?

**Item 44.** If the treatment processes for in-situ and ex-situ solidification are the same, the effectiveness of the treatment would be identical and should be ranked the same. At this point of the evaluation (Table 9-8), ability to meet ARARs is not a consideration. The eventual fate (off-site vs. on-site) of the treated media and the need for long-term monitoring should not be considered in the evaluation of effectiveness.

**Item 48.** Resolution partially accepted. The (a) additional information included in the revised hydrologic description provides more details and gives a more accurate description of the conditions at the site.

The added text (b) in Section 5 gives a more detailed description of the assumptions used to estimate a risk factor associated with the liquid discharge ponds at WAG 5. The added text states that using residual contamination in soils "...for sites such as ponds may tend to underestimate the risk," and that "...the consequences of underestimating the mass for WAG 5 evaporation ponds are probably not significant." The linear relationship between mass and risk illustrates that these are assumptions that could affect the predictive accuracy of the model; and as such, the input parameter used should be conservative.

While the statement that the "...consequences for underestimating the mass for WAG 5 ...are probably not significant." can neither be substantiated or refuted, it may in time prove to be overly optimistic. The uncertainty of the contaminant mass and interbed thickness averaging used as input parameters for modeling at WAG 5 are values that affect the predictive ability of the model and as such conservative upper bound estimates should be used. Averaging the interbed thickness and using residual soil contamination may not reflect an upper bound of the actual mass or the vadose zone transmissivity.

Finally, the text on page 5-6 refers to these infiltration structures as "evaporation ponds". They were originally described as seepage pits or infiltration lagoons and this portion of the text should be amended to provide a consistent and accurate description.

**Item 49.** Section 2, Hydrology and Section 4, Nature and Extent of Contamination.

Resolution rejected. The statement that the ground water monitoring system "is adequate.....because WAG 5 operations primarily generated surface contamination not groundwater contamination." does not provide any evidence that the ground water monitoring system is effective. LIMITCO's assumption that past disposal activities that include infiltration ponds and lagoons has not affected ground water quality needs to be substantiated with additional ground water quality data. The current monitoring system may have been adequate for site evaluation to this point but additional ground water monitoring locations downgradient of the site may be required in the future.

**Item 50.** Section 3.0. Resolution rejected. The lack of records and process data provide limited information with which to evaluate the potential contaminant mass at WAG 5 liquid waste discharge points. The uncertainty, introduced to the model by using residual contaminant concentrations detected in a limited number of shallow soil samples as an estimate of the mass of liquid wastes discharged directly to the basalt aquifer, cannot be predicted. WAG 5 discharge pits and ponds were constructed to allow the liquid discharges to bypass the shallow soil and infiltrate directly to the top of the basalt formation. This type of infiltration system would leave limited indication in the adjacent shallow soils of the contaminant discharge made to the discharge pit itself.